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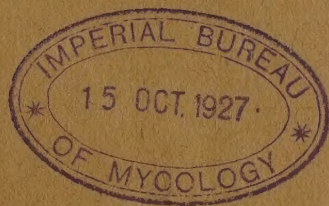
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# INTERNATIONAL BULLETIN

OF

## PLANT PROTECTION

### DISCOVERIES AND CURRENT EVENTS IN WORLD PHYTOPATHOLOGY

#### Belgium: First Notification of the Existence of "Wart Disease" of the Potato (1).

Two centres, of "wart disease" of the potato (*Synchytrium endobioticum*) have just been discovered almost simultaneously, the one at Cour-lecles (Hainaut), the other at Stavelot (Province of Liège).

In these two places the disease is localised in certain groups of small workmen's gardens, the produce of which is consumed by the occupiers themselves and wherein potato growing is often repeated on the same plot.

The competent Services of the Ministry of Agriculture have immediately taken the necessary steps for dealing with the situation.

#### Ceylon: A newly-found Cause of Root Disease of Ceylon Plants (2).

The fungus in question is *Rhizoctonia bataticola* (Taub.) Butler, formerly known as *Sclerotium bataticola* Taub. It has been described as the cause of a rot of sweet potatoes in the United States of America, of root disease of herbaceous plants in India and Egypt, and of root disease of woody plants in Uganda. In Ceylon its list of hosts includes plants of economic importance, green manure, shade, ornamental, fruit and timber trees, and horticultural plants. The majority of the records are new for other parts as well as for Ceylon. The list of hosts is being extended; at the moment it is follows:—*Camillea theifera* (older plants and seedlings), *Theobroma cacao*, *Hevea brasiliensis*, *Cocos nucifera*, *Anona muricata*, *A. squamosa*, *Citrus medica* var. *acida*, *C. aurantium*, *Coffea robusta*, *Musa paradisiaca*, *Lycopersicum esculentum*, *Capsicum annuum*, *Phaseolus vulgaris*, *Garcinia mangostana*, *Albizia moluccana* (also seedlings), *Grevillea robusta*, *Acacia decurrens*, *A. elata*, *Erythrina* sp., *Tephrosia*

(1) Communication from the official correspondent to the Institute, M. EM. MARCHAL, Director of the State Phytopathological Station at Gembloux.

(2) Communication from the official correspondent to the Institute, Dr. W. SMALL, M. B. E., F. L. S., Mycologist, Department of Agriculture, Peradeniya, Ceylon.

*candida*, *Clitoria cajanifolia*, *Cupressus macrocarpa*, *Juniperus* sp. (seedlings only), *Ochroma lagopus*, *Tristania conferta*, *Amherstia nobilis* (young plants only), *Cupressus Lawsoniana* (seedlings only), *Cassia multijuga*, *Artocarpus integrifolia* (young plants only), *Rosa* (hort.), *Hibiscus rosa-sinensis*, *Aralia filicifolia* (hort.), *Tibouchina* (*Lasiandra*) sp. and *Dahlia* (hort.).

In Ceylon *Rhizoctonia bataticola* occurs alone on and in the roots of its host plants in many instances and under conditions such that it must be regarded as a parasitic fungus. In other cases, it is accompanied by one or more of the fungi which have been regarded in the past as causes of root disease in the tropics, particularly of woody plants, namely, *Fomes* (*lignosus* and *lamaensis*), *Poria*, *Rosellinia*, *Ustilina* and *Diplodia* (*Botryodiplodia*) *theobromae*, but the circumstances of its occurrence in such complicated cases point to the primary parasitism of the *Rhizoctonia* and to the secondary nature of the other fungi. Further investigation is in progress, and a pycnidial stage of the sclerotial *Rhizoctonia* has been found. Root infection experiments are also in hand. *Rhizoctonia bataticola* is suspected of being widely distributed in tropical and sub-tropical regions and of being of great economic importance.

#### 'Iraq: Phytopathological Notes (I).

**Rusts of wheat** (*Puccinia* spp.). — Rust attacks seem generally to be of a milder character than frequently and their comparatively late appearance this year reduces the damage caused.

**Locusts.** — Following the very unusual Southerly invasion of Locusts (*Doclostaurus maroccanus*) as far as Baghdad and on the Euphrates from Fellujah to the Syrian border, and in view of very extensive egg-laying having taken place in the Northern Liwas of Mosul, Arbil, Sulaimania and Kirkuk a comprehensive campaign was planned by the Department of Agriculture and about Rs. 800,000 was allocated for the purpose.

This campaign was based on the use of bran-molasses-sodium arsenite baits and operations commenced with the hatching of hoppers from 12 March onwards. Very successful results have been achieved in all districts and enormous areas of wheat and barley have been saved from destruction.

As in 1926, but unlike all other years for which records are available, hatchings took place in the same locality over a period as long as three weeks; in fact locusts in three or four different stages have been found on the same ground. The reason for this is not known. In the Kurdish mountain districts locusts were hatching even at the end of April, being here, presumably, controlled by temperature.

**Ergaija** ("Sun" pest): *Eurygaster integriceps*. — In 1924 and 1925 large flying swarms invaded the Northern territories of 'Iraq and caused very extensive damage to wheat and barley. In 1926 only one doubtful instance was reported, in the Sulaimania area and very

(7) Communication from Mr. F. H. JACKSON, for the Inspector-General of Agriculture, 'Iraq, official correspondent to the Institute.



slight damage was done. In 1927 up to the end of April the insect has never been reported though a special watch has been kept for it. The reason for its non-appearance is not known; it can only be conjectured that the insect has either found adequate supplies of cereal plants in another country or that some factor has caused great mortality among the hibernating bugs, which it is believed fly from the 'Iraq plains to the mountains of Persia and Turkey and there pass the winter.

#### Italy: Diseases of Lilac and of *Aster* sp. in Piedmont (1).

Lilacs (*Syringa vulgaris*) grown on a large scale by a Turin nurseryman have been attacked by a wasting disease marked by necrosis of the collet which is produced by a fungus of the family *Perizaceae*, of which the systematic position and biology are at present being studied by the local Phytopathological Observatory.

A very virulent form of *Fusarium* disease is damaging *Aster* beds.

#### Rumania: Apple Powdery Mildew (2).

Apple Powdery Mildew, produced by *Podosphaera leucotricha* (Ell. and Ev.) Salm., is rather uncommon in our country. This year it appeared towards the end of May in several gardens of the Tecuci and Tutova districts (Moldavia), where it was noted by us between 6 and 10 June. The flower buds and the young leafy shoots are covered with a thick white network of a floury nature caused by the mycelium and its conidial apparatus. The trees attacked bear no fruit. The older leaves are not attacked by the fungus.

The development of the disease was helped by a cold, wet spring followed by a dry summer. Different varieties have different power of resistance. Thus the "Reinette du Canada" is very susceptible while native varieties such as "Domnești" and "Crețești" are practically unharmed by the disease.

### VARIOUS QUESTIONS RELATING TO PLANT PROTECTION IN THE DIFFERENT COUNTRIES

#### Algeria: Flights of *Doclostaurus maroccanus* during the Month of June, 1927 (3).

1. On 3 June, at the following places, Ref El Assel, Oued El Guelta, Aïn Guéralta and Ferah Dahia of the mixed Commune of Aumale (Department of Algiers, douar of Taguedide).

(1) Communication from the "R. Osservatorio di Fitopatologia" of Turin, transmitted by the "R. Stazione di Patologia vegetale" of Rome, official correspondent to the Institute.

(2) Communication from the official correspondent to the Institute, Dr. Trajan SĂVULESCU, Professor at the "Școala Superioară de Agricultură" at Herestrau-Bucharest.

(3) Communication from the Governor General of Algeria to the President of the International Institute of Agriculture.

2. On 22 June, at the douar of M'Hamid, the plain of Oued El Abd, Aïn Zitony of the mixed Commune of Cachrou (Department of Oran).

3. On 27 June, at Le Moulin Coincon of the Commune of Uzès le Duc (Department of Oran).

4. On 30 June, at Kherabcha of the mixed Commune of Les Maadid (Department of Constantine).

#### Dominican Republic: Chief Insects Harmful to Crops (1).

**Citrus Plants** (*Citrus* spp.). — (1) *Chrysomphalus aonidum* (L.). This is the scale insect very common on the leaves; during winter in some provinces (La Vega) it is badly attacked by the fungus *Aschersonia* sp.; it is also controlled by different Hymenopterous parasites, the most important of which is *Aspidiotiphagus lounsburyi*.

(2) *Selenaspidus (Aspidiotus) articulatus* (Morg.), chiefly on the leaves; in intensity of attack it follows the preceding species.

(3) *Chionaspis citri*, Comst.: considerable development on the fruits, branches and trunk.

(4) *Lepidosaphes pinnaeformis* (Bouché), on lemon plants in the province of San Pedro de Macoris.

(5) *Coccus viridis*? (Green), sometimes harmful, when accompanied by "sooty mould".

(6) *Saissetia oleae* (Bern.), widespread but not of great importance.

(7) *Ceroplastes floridensis*? Comst., little developed.

(8) From time to time the leaves are attacked by Coleoptera, chiefly by *Diaprepes spengleri*.

**Avocado Pears** (*Persea gratissima*). — (1) *Pulvinaria piri-formis*, Ckll.; (2) *Aspidiotus destructor*, Sign. These scale insects are found on the underside of the leaf, mainly along the nerves.

**Cacao** (*Theobroma Cacao*). — The scale insect *Pseudococcus virgatus*? (Ckll.) threatens to become very harmful unless dealt with in time. It is protected by an ant which uses bits of lichen, of wood, and close to the base of the trunk grains of earth to form galleries along the trunk, forming a sort of roof, where the scale insect lives; the latter prefers the fruit and its peduncle. This *Pseudococcus* attacks also the peduncle of the flower and the young buds.

Another insect which only rarely and sporadically attacks cacao plants, is a Termite, *Calotermes* sp.

**Sugar Cane** (*Saccharum officinarum*). — The most harmful insect is *Diatraea saccharalis*, Fabr. The scale insect *Pseudococcus sacchari* (Ckll.), which lives chiefly near the nodes, protected by the leaf sheath is also widespread.

**Coffee** (*Coffea arabica*). — The leaves are damaged, sometimes seriously, by the larva of *Leucoptera coffeella*, Guenée.

(1) Communication from the official correspondent to the Institut, Dr. Giuseppe RUSSO, Entomologist of the "Estación Nacional Agronómica y Colegio de Agricultura", Moca.



The leaves and buds are also attacked by the scale insect *Pseudococcus viridis*? Green.

**Cabbages** (*Brassica* spp.). — The leaves are greatly spoilt by the caterpillar of *Plutella maculipennis*, Curtis. This is attacked by parasitic Hymenoptera which will be determined and studied.

**Onions** (*Allium Cepa*). — The insect most to be feared and one which unless checked will cause serious damage is *Thrips tabaci*, Lindemann. It develops in the most extraordinary way chiefly in dry seasons, as it finds rain a serious impediment.

**Coconut** (*Cocos nucifera*). — The most harmful insect is the scale *Aspidiotus destructor*, Signoret, which lives on the underside of the leaves and often kills them, so severe is its attack. To damage done by scale insects must be added the destructive action of the caterpillar of *Homaledra sabulella*, Chambers.

The two insects are polyphagous species and are therefore treated with difficulty or, rather, uneconomically by artificial control methods and consequently all possible methods of biological or natural control will be considered. Hence, if advantage may be taken of the work which is being developed by the International Institute of Agriculture, I should be grateful to any entomologists who would give me information especially as to possible parasites to introduce, seeing that *A. destructor* and *H. sabulella* are species exotic to the Dominican Republic.

Here *A. destructor* is attacked to a very slight extent (2-3 %) by the Hymenopteron *Aphelinus chrysomphali*, Mercet, while the predatory ladybirds (*Scymnus* spp.) do not touch it, chiefly attacking the dead bodies of scale insects.

**Cotton**. (*Gossypium* sp.). — *Pectinophora gossypiella*, Saund. is a real pest and forms the chief impediment to the spread and increase of cotton growing in the country.

The bolls are also attacked by two Hemiptera, *Dysdercus andreae* and *Dysd. neglectus*.

**Beans** (*Phaseolus* spp.). — The Hemipteron *Empoasca mali*, Le Baron can assume pest proportions in the summer.

In winter, it is severely attacked by the fungus *Beauveria* (*Sporotrichum*) *globulifera*.

From time to time the leaves are attacked by certain beetles especially of the genus *Diaprepes*.

**Guava** (*Psidium Guajava*). — (1) *Coccus viridis*? (Green) attacks the leaves and branches. (2) *Pulvinaria piriformis*, Ckll., attacked in its turn while in the egg stage by a small predatory lady-bird which is often fairly successful in countering the scale insect.

**Papaw Tree** (*Carica Papaya*). — The scale insect *Pseudoparlatoria* sp. attacks the stem, the petioles, or the leaf blades. It is not uncommon to see plants entirely covered with the little scales of the insect.

Specimens of *Aspidiotus destructor* are sometimes found on the underside of the leaf.

**Maize** (*Zea Mays*). — Maize is badly attacked by insects both in

the field and in the granaries, and a 50 % loss may be estimated as caused in this way.

- (1) *Laphygma frugiperda*, S. and A. attacks buds and leaves.
- (2) *Chloridea obsoleta*, Fabr. : Its larva lives mainly inside the cob apart from the direct damage done the galleries made by it in the cob encourage the advent of other insects.
- (3) *Aphis* spp. attack chiefly the buds and often the whole plant.
- (4) *Calandra oryzae*, L. attacks the cobs both in the field and in the granary.

(5) *Sitotroga cerealella* (Oliv.), harmful chiefly to cobs in the granary.  
 Egg Plant (*Solanum Melongena*). — (1) *Epitrix parvula*, Fabr. : this small beetle attacks the leaves and causes the same damage as to potato leaves, riddling them to the serious detriment of growth and crop.

(2) *E. cucumeris*, Harr. is found in company with the last species though in smaller numbers, while it attacks tobacco severely.

(3) *Corythaica monacha*, Stal. attacks the plant, often causing considerable damage, living on the underside of the leaves which suffer chlorosis and often die.

Mango (*Mangifera indica*). — The leaves are attacked chiefly by the scale insect *Vinsonia stellijera*, West.

Palms. — The leaves are attacked chiefly by the caterpillars of *Homoledra sabulella*, Chambrs.

Potatoes (*Solanum tuberosum*). — (1) *Phthorimaea operculella*, Zell., is very widespread chiefly in the province of Monte Cristy.

(2) *Epitrix parvula*, Fabr., mentioned above.

Mexican Apple (*Casimiroa edulis*). — The insect which does most damage to this plant, attacking leaves and buds, is the scale insect *Coccus* sp. which is the indirect cause of damage by sooty mould, whose growth it favours.

Pine Apple (*Ananas sativus*). — The fruit is attacked, but hitherto not very seriously by the scale insect *Pseudococcus* sp.

Tomatoes (*Lycopersicum esculentum*). — The leaves are attacked by the caterpillar of *Protoparce sexta*, Joh.

Tobacco (*Nicotiana Tabacum*). — (1) *Prot. sexta*, Joh. : the caterpillar eats the leaves.

(2) *Epitrix cucumeris*, Harr. : among the various Solanaceae it prefers the potato ; the damage consists in the riddling of the leaf which often becomes like a sieve.

(3) *E. parvula*, Fabr. : produces the same damage as the last, but is generally present in smaller numbers, preferring potatoes and the egg plant, in certain cases however the leaves are actually spoilt by the damage done.

Gourds (*Cucurbita* spp.). — The fruits, the petioles and the stems are often tunnelled by galleries made by the caterpillars of *Margaronia hyalinata* ? L. to the detriment of growth and crop.

The leaves often curl and become yellowish in consequence of *Aphis gossypii*, Glover, which lives on the underside of the leaf where it forms characteristic colonies.



Uruguay : Brief Note regarding *Icerya purchasi* and its Control by *Novius cardinalis* (1).

There are in this country at the present time a considerable number of scale insects parasitic on cultivated plants, which have been accidentally introduced into Uruguay with these plants at various times. It is indisputable that they have become well acclimatized to the temperate climate and have continued to increase throughout the country, sometimes in quite unexpected forms and in a very short time, with serious resulting damage to agriculture. Among these insects are found the well known *Icerya purchasi*, Mask., which has gradually spread to various kinds of plants, attacking citrus plantations as well as other trees on the farms on the outskirts of Montevideo, and thus becoming a serious menace to their existence.

There is reason for believing that *Icerya purchasi* were accidentally introduced into Uruguay in the year 1914, with some plants imported from Portugal, which were planted by their owner in a garden outside the capital. They were observed for the first time in 1915 and have increased and spread to such an extent since that date that there are no plantations of citrus, acacia, roses, etc., which are entirely free from this dangerous parasite.

The most energetic measures were taken by the late "Defensa Agrícola" to prevent the increase of this insect throughout the Republic, and a supply of its special enemy, *Novius cardinalis*, Muls., was obtained from Portugal, but the results were less satisfactory than was expected.

The Laboratory of Plant Pathology of Lisbon sent various consignments to Uruguay, but unfortunately the insects always arrived dead.

Hence at the beginning of 1919 the late "Comisión Central de Defensa Agrícola" on the initiative of the Director Robert SUNDBERG, Ing. Agr., arranged to send an expert to France, and the same year Nicolás CORREA LUNA, Ing. Agr., properly went to that country and brought back a quantity of these insects, only a few of which lived owing, no doubt, to the length of the voyage. These few specimens, being kept in special cages and properly fed, speedily multiplied, the season also being favorable, and thus, in a few months it was possible to release the first groups, so that by degrees they might increase in the principal centres of *Icerya*.

In a very short time beneficial results were noted and it might be said, without fear of exaggeration, that within a year, more or less, of the introduction of *Novius cardinalis*, the *Icerya* was practically exterminated, and ceased to exist as a serious pest.

It should be recognized that it is due to *Novius cardinalis* and its potent destructive action that Uruguay has been able to preserve its important citrus plantations and at no great cost.

During the summer months small isolated groups of *Icerya* appear and spread over plantations, but they soon disappear under the influence of this great friend of agriculture.

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(1) Communication from the official correspondent to the Institute, Sr. Agustín TRUJILLO PELUFFO, Ingeniero Agrónomo Regional, Sección Fomento y Defensa Agrícola de la Dirección de Agronomía, Montevideo.

Some time after the acclimatization of the *Novius cardinalis* in Uruguay consignments of this insect were sent thence by request to various countries.

## LEGISLATIVE AND ADMINISTRATIVE MEASURES

**England (1).** — The Minister of Agriculture and Fisheries in virtue of the Destructive Insects and Pests Acts, 1877 and 1907, has issued an Order, which came into force on 30 April 1927, prohibiting the entry into England and Wales of any raw cherries shipped from any port in European France unless accompanied either by a special certificate issued by a duly authorized official of the French Services d'Inspection Phytopathologique in the case of cherries grown in France, or otherwise by a certificate of origin in respect of each consignment visé by a Local Authority in the country of origin.

The Importation of Raw Cherries Order of 1926 is hereby revoked. (*Statutory Rules and Orders*, 1927, No. 349. *Destructive Insect and Pest, England. The Importation of Raw Cherries Order of 1927. Dated April 22, 1927. [D. I. P. 546].* London, 1927, 3 p.).

\*\*\* The Minister of Agriculture and Fisheries, in virtue of the Destructive Insects and Pests Acts, 1877 and 1907, has issued an Order, which came into force on 25 April 1927, prohibiting in England and Wales the sale or exposure for sale of any plant or part of plant which is attacked by any of the following insects or pests:— Fruit Tree Cankers (caused by any parasitic fungi), American Gooseberry Mildew (*Sphaerotheca mors-uvæ*, Berk.), Silver Leaf (*Stereum purpureum*, Pers.), Black Currant Mite (*Eriophyes ribis*, Nal.), Woolly Aphis (*Eriosoma lanigerum*, Hausm.), all Scale Insects (*Coccidae*), Brown Tail Moth (*Nygmia phaeorrhoea*, Dan. = *Euproctis chrysorrhoea*, Linn.), Rhododendron Bug (*Leptobyrza* [*Stephanitis*] *rhododendri*, Horv.), Powdery or Corky Scab of Potatoes (*Spongospora subterranea* [Wallr.] Johnson), Apple Capsid (*Plesiocoris rugicollis*, Fall.).

The sale of plants, etc., attacked by Wart Disease (*Synchytrium endobioticum* [Schilb.] Perc.) or Onion and Leek Smut (*Urocystis cepulae*, Frost.) is dealt with under the following Orders respectively: Wart Disease of Potatoes Order of 1923, Onion Smut Order of 1921.

The American Gooseberry Mildew Order of 1919 and the Sale of Diseased Plants Order of 1922 are hereby revoked. (*Statutory Rules and*

(1) The countries are arranged in the French alphabetical order.



*Orders, 1927, No. 350. Destructive Insect and Pest, England. The Sale of Diseased Plants, Order of 1927. Dated April 22, 1927. [D. I. P. 545]. London, 1927, 4 p.).*

\*\*\* For the purpose of preventing the introduction of the Potato Moth (*Phthorimaea operculella*, Zell.), the Minister of Agriculture and Fisheries has issued an Order under the Destructive Insects and Pests Acts, 1877 and 1907, which came into force on 2 May 1927, prohibiting the landing in England and Wales of any potatoes grown in the Canary Islands, unless accompanied by a certificate of health prescribed in the Destructive Insects and Pests Order of 1922. (*Statutory Rules and Orders, 1927, No. 377. Destructive Insect and Pest, England. The Importation of Potatoes (Canary Islands) Order of 1927. Dated May 2, 1927 [D. I. P. No. 547], London, 1927, 1 p.).*

**Canada.** — By a Decree of the Governor General in council, dated 20 April, 1927, No. 717, the following Regulations, the text of which is given in this Decree, have been revised :

(1) Regulation No. 3 (Foreign), 3rd Revision, prohibiting the importation of potatoes from Europe, the Azores Islands, the Canary Islands, Newfoundland, the Islands of St. Pierre and Miquelon, and the State of California ; shipments of potatoes from the States of Pennsylvania, West Virginia and Maryland shall be accompanied by a certificate stating that such potatoes were grown outside any area quarantined for wart disease (*Synchytrium endobioticum*).

(2) Regulation No. 4 (Foreign), 1st Revision, prohibiting the importation of all non-canned fruits or vegetables from the Hawaiian Islands, except the fruits of pineapple, banana and coconut, provided they have been inspected and certified free from infestation by the Mediterranean fruit fly [*Ceratitis capitata*].

(3) Regulation No. 8 (Foreign), 2nd Revision, prohibiting the importation of rooted plants, grafts or cuttings of currants and gooseberries (*Ribes* and *Grossularia*) from all countries with the exception of standard commercial varieties of gooseberries and red or white currants cultivated for their edible fruits only, as well as the fruits of currants or gooseberries, the importation of which is not restricted.

(4) Regulation No. 10 (Foreign), 4th Revision, prohibits importation of the following plants or plant products :—

(a) Corn and broom corn, including all parts of the plant, all sorghums and Sudan grass from the following States of the United States of America : Connecticut, Indiana, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont and West Virginia ;

(b) During the period June 1 to December 31, cut flowers and entire plants of chrysanthemum, aster, cosmos, zinnia, hollyhock, and cut flowers or entire plants of gladiolus and dahlia except the corms and roots there- or without stems, oat and rye straw as such or when used for packing celery, green beans in the pod, beets with tops, and rhubarb, from the

States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

Broom corn for manufacturing, clean shelled corn either for seed or feed purposes, and clean seed of broom corn, may be imported provided such shipments are accompanied by a certificate of inspection, issued by an authorized officer of the United States Department of Agriculture, which states that the shipment is free from infestation by the European corn borer [*Pyrausta nubilalis*].

(5) Regulation No. 11 (Foreign), 2nd Revision, prohibiting the importation of alfalfa (lucerne) hay, whether for feeding, packing or other purposes, originating in the following States of the United States of America: California, Colorado, Idaho, Nevada, Oregon, Utah and Wyoming.

All shipments of alfalfa (lucerne) hay consigned to the provinces of Manitoba, Saskatchewan, Alberta and British Columbia shall be accompanied by a certificate, duly signed by the consignor, indicating the State in which the alfalfa (lucerne) hay was grown.

(6) Regulation No. 14 (Foreign), 2nd Revision, prohibiting the importation of all fresh peaches and peach nursery stock from the States of Wisconsin, Illinois, Missouri, Tennessee and Mississippi and the area east of these States, and from all other States of the United States of America unless the shipment of fresh peaches or peach nursery stock is accompanied by a statement duly signed by the consignor indicating the name of the State in which the peaches were grown; furthermore, the importation into British Columbia of all peach fruit pits or seeds for propagating purposes is prohibited from the States of Wisconsin, Illinois, Missouri, Tennessee and Mississippi and the area east of these States.

(7) Regulation No. 2 (Domestic), 6th Revision, restricting the movement of corn and corn products from certain areas in the provinces of Ontario and Quebec on account of the European corn borer [*Pyrausta nubilalis*].

Provision is made for the movement of the products under quarantine when complying with any one of the conditions laid down in this regulation.

(8) Regulation No. 3 (Domestic), 1st Revision, prohibiting the importation into the provinces of Alberta and British Columbia of all five-leaved species of the genus *Pinus* and their horticultural varieties from the other provinces of Canada.

(9) Regulation No. 8 (Domestic), restricting the sale on and after 1 June, 1927 of all species and varieties of black currants in Canada. (*The Canada Gazette*, Ottawa, May 14, 1927, vol. LX, no. 46, pp. 3464-3465).

**Eritrea.** — A Decree of the Governor dated 14 May, 1927, No. 4434, forbids the introduction into and transit in the Colony of banana plants and bananas coming from abroad. (*Bullettino ufficiale della Colonia Eritrea*, Asmara, 31 maggio 1927, anno XXXIV, n. 10, pp. 117-118).

**Italy.** — Royal Decree-Law, No. 1071, of 16 June, 1927, lays down that among the duties of the provincial Economic Councils ("Consigli



provinciali dell'Economia") — set up in accordance with Law No. 731 of 18 April, 1926 — is that of reporting on the police regulations concerning, among other things, the control of crop enemies. (*Gazzetta ufficiale del Regno d'Italia*, Roma, 7 luglio 1927, anno 68°, n. 155, p. 2866).

\* \* By Law No. 1118 of 16 June, 1927, the Royal Decree-Law No. 854 of 20 May, 1926, containing exceptional regulations for catching sparrows for the protection of wheat crops, has been converted into a Law. (*Gazzetta ufficiale del Regno d'Italia*, Roma, 11 luglio 1927, anno 68°, n. 158, p. 2912).

\* \* Following the presence of grape phylloxera [*Phylloxera vastatrix*] which has been determined in the Commune of Sommariva Perno, in the Province of Cuneo, a Decree dated 30 June, 1927 has extended to the above Commune the rules contained in arts. 10-14 of Regulation No. 1099 of 13 June, 1918, relating to the exportation of such materials as are indicated in nos. 1, 2, 3 and 4 of art. 10 of the same Regulation. (*Gazzetta ufficiale del Regno d'Italia*, Roma, 6 luglio 1927, anno 68°, n. 154, p. 2864).

**Luxemburg (Grand Duchy of).** — By Decree of 2 July, 1927, the importation into the Grand Duchy of cherries coming from France is authorized only when the consignments are accompanied by a certificate issued by the Phytopathological Service of the country of origin attesting: (a) that these goods come from a district exempt from the cherry fruit fly (*Rhagoletis cerasi*) and (b) that the consignments themselves have been found free from *Rhagoletis* by this Service.

Importation will only be allowed through the railway custom-houses and through the custom-houses of Schengen, Dudelange, Frisange, Mondorf, Esch-s-Alz. and Rodange.

Consignments not accompanied by the certificate prescribed above will be rejected unless they are found on examination by the Luxembourg Phytopathological Service to be free from *Rhag. cerasi*. Such examination will be made at the expense of the importers.

Every producer or warehouse of cherries who notes the presence of *Rhag. cerasi* in his crop or storehouse must immediately declare the fact to the Mayor of the Commune, who will inform the Phytopathological Service by telegram. (*Mémorial du Grand-Duché de Luxembourg*, Luxembourg, 9 juillet 1927, n° 36, p. 509-510).

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